CLAIMS:

1. A method of making a microelectronic assembly, comprising the steps of:

a) providing a first side assembly having a top surface and an oppositely facing bottom surface, and a second side assembly having a first surface so that the bottom surface of the first side assembly is juxtaposed with the first surface of the second side assembly;

b) providing leads extending between the first side assembly and the second side assembly and a first resilient element disposed between the first side assembly and the second side assembly;

c) applying a compressive force to the juxtaposed assemblies so as to compress the first resilient element; and

d) at least partially releasing the compressive force so as to allow the first resilient element to expand, thereby moving one or both of the first side assembly and the second side assembly to deform the leads.

2. The method of claim 1, wherein the step of providing a first side assembly includes providing a microelectronic element.

3. The method of claim 2, wherein the step of providing a first resilient element includes attaching the first resilient element to the first side assembly.

4. The method of claim 3, wherein the step of providing leads comprises providing leads extending between the microelectronic element and the second side assembly.

5. The method of claim 4, wherein the leads have a first end and a second end, the microelectronic element includes contacts, and the method further comprises bonding the first end of one of the leads to each of the contacts, wherein the second ends of each of the leads is attached to the second side assembly.

6. The method of claim 4, wherein the step of providing a first side assembly includes providing a frame having an aperture for receiving a microelectronic element and

the step of providing a first side assembly includes inserting the microelectronic element into the aperture.

7. The method of claim 1, wherein the at least one resilient element comprises a material having a low compression set.

8. The method of claim 7, wherein the low compression set material has an initial height before the step of applying a compressive force and a final height after the step of at least partially releasing the compressive force, the final height being between 80% to 100% of the initial height.

9. The method of claim 8, wherein the low compression set material is comprised of a silicone elastomer or a flexiblized epoxy.

10. The method of claim 1, wherein the at least one resilient element is porous.

11. The method of claim 4, wherein the step of providing a first side assembly includes providing at least one auxiliary element and providing the first resilient element between the at least one auxiliary element and the second side assembly.

12. The method of claim 11, wherein the auxiliary element is disposed adjacent the microelectronic element so as to confront at least one of the first side assembly and the second side assembly.

13. The method of claim 12, wherein the auxiliary element has a central region extending over a surface of the microelectronic element and a peripheral region lying outwardly of the central region, the first resilient element including at least one resilient pad disposed between the peripheral region and the second side assembly.

14. The method of claim 13, wherein the step of providing a first side assembly includes attaching the central region of the auxiliary element to the microelectronic element.

15. The method of claim 11, wherein the step of

providing a first side assembly includes providing at least one auxiliary element comprising at least one post extending alongside the microelectronic element.

16. The method of claim 15, wherein the step of providing a first resilient element includes attaching the first resilient element to the at least one post so that the at least one resilient element extends between the at least one post and the second side assembly, and attaching the at least one post to the microelectronic element.

17. The method of claim 1, wherein the first side assembly comprises a flexible dielectric layer.

18. The method of claim 1, wherein the step of providing leads includes providing leads having a first end permanently attached to the second side assembly and a second end releasably attached to the second side assembly.

19. The method of claim 18, wherein, during the step of at least partially releasing, the second ends of the leads are peeled from the first surface of the first element.

20. The method of claim 4, wherein the step of providing leads includes providing leads on the microelectronic element and bonding the leads to the second side assembly.

21. The method of claim 1, wherein the step of providing a first resilient element includes stencil printing a composition onto at least one of the first side assembly and the second side assembly.

22. The method of claim 21, wherein the step of providing at least one resilient element includes stencil printing a curable composition and curing the curable composition.

23. The method of claim 4, further comprising juxtaposing a structure over the microelectronic element.

24. The method of claim 23, wherein the structure comprises a heat spreader.

25. The method of claim 23, further comprising providing a second resilient element on a surface of the

structure facing the microelectronic element.

26. The method of claim 25, further comprising providing adhesive on the structure, on a surface of the structure which faces the microelectronic element.

27. The method of claim 26, wherein the adhesive is a curable adhesive and further comprising curing the adhesive during the step of applying a compressive force.

28. The method of claim 23, further comprising juxtaposing a coverlay over the structure and attaching the coverlay to the first side assembly.

29. The method of claim 1, further comprising encapsulating the deformed leads by disposing a curable composition around the leads and curing the curable composition.

30. The method of claim 29, wherein the cured composition is compliant.

31. The method of claim 1, wherein the first side assembly includes a plurality of microelectronic elements, the second side assembly includes a dielectric layer and the method further comprises after the step of introducing an encapsulant cutting through the dielectric layer around the microelectronic elements.

32. The method of claim 31, wherein the first side assembly includes a wafer having a plurality of microelectronic elements.

33. The method of claim 1, wherein the step of applying a compressive force comprises applying an elevated pressure to at least one surface of the first side assembly which faces away from the second side assembly.

34. The method of claim 1, wherein the step of applying a compressive force comprises applying a vacuum to at least one surface of the first side assembly which faces toward the second side assembly.

35. The method of claim 1, wherein the leads are comprised of a metal selected from the group consisting of copper, gold, gold alloys and copper alloys.

36. The method of claim 5, further comprising the step of attaching solder balls to the second side assembly, wherein each of said solder balls is electrically interconnected to one of the second ends of one of the leads.

37. The method of claim 1, wherein the first side assembly further includes a conductive plane disposed on a bottom surface thereof.

38. A microelectronic package made according to the method of claim 1.